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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,975	10/02/2001	Yoshiaki Nagaura	F-7146	6687

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Jordan and Hamburg
122 East 42nd Street
New York, NY 10168

EXAMINER

DOUGHERTY, THOMAS M

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 11/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/914,975

Applicant(s)

NAGAURA, YOSHIKI

Examiner

Thomas M. Dougherty

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 7-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 7-40 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Election/Restrictions

Claims 7-40 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a non-elected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 7. The restriction is maintained for reasons cited in the restriction requirement of paper 6.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language of the claims, while thought to be understood, is problematic. The language appears to indicate that the piezoelectric element may have either a concave or convex shape and may be itself within a concavity or alternatively, not be within one. However this is not explicitly stated. Additionally, the figures do not show the concave and convex shaped parts of the piezoelectric element to be within a true concavity since the sidewalls of the so-concavity are not bowl-shaped but linear.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 2, as best understood, is rejected under 35 U.S.C. 102(b) as being anticipated by Sims (US 4,228,532). Sims shows (fig. 1) an arbitrary shape piezoelectric element comprising a concave-lens shape concave part (26) at one central oscillating surface and a convex-lens-shape convex part (14) at another central surface.

Claim 2, as best understood, is rejected under 35 U.S.C. 102(b) as being anticipated by Kumada (US 4,471,258). Kumada shows (fig. 4d) an arbitrary shape piezoelectric element (5) comprising a concave-lens shape concave part at one central oscillating surface and a convex-lens-shape convex part at another central surface.

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Claim 4, as best understood, is rejected under 35 U.S.C. 102(b) as being anticipated by Olympus Optical Co LTD. (JP 10-127678). Olympus shows (fig. 2) an arbitrary shape piezoelectric element (19) comprising a concave-lens shape concave part at one central oscillating surface and a convex-lens-shape concave part at another central surface.

Claim 4, as best understood, is rejected under 35 U.S.C. 102(b) as being anticipated by Kumada (US 4,471,258). Kumada shows (fig. 4c) an arbitrary shape piezoelectric element (5) comprising a concave-lens shape concave part at one central oscillating surface and a convex-lens-shape concave part at another central surface.

Claim 5, as best understood, is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Besson (US 4,135,108). Besson shows (fig. 15) an arbitrary shape piezoelectric element comprising a convex-lens-shape concave part (40) at one central oscillating surface and a plane-lens-shape concave part (41) at another central surface.

Claim 5, as best understood, is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Besson (US 4,221,986). The reference shows (fig. 1) an arbitrary shape piezoelectric element comprising a convex-lens-shape concave part (40) at one central oscillating surface and a plane-lens-shape concave part (41) at another central surface.

Claim 6, as best understood, is rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP 53-71595. The reference shows (fig. 3) an arbitrary shape piezoelectric element (10) comprising a convex-lens-shape concave part at one central oscillating surface and a convex-lens-shape concave part at another central surface.

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Claim 6, as best understood, is rejected under 35 U.S.C. 102(e) as being clearly anticipated by Sasaki et al. (US 6,191,524). The reference shows (fig. 2) an arbitrary shape piezoelectric element (1) comprising a convex-lens-shape concave part at one central oscillating surface and a convex-lens-shape concave part at another central surface.

Claim 6, as best understood, is rejected under 35 U.S.C. 102(e) as being clearly anticipated by Matsumoto (US 6,455,985). The reference shows (fig. 3) an arbitrary shape piezoelectric element (112) comprising a convex-lens-shape concave part at one central oscillating surface (128 side) and a convex-lens-shape concave part (129 side) at another central surface.

Claim 6, as best understood, is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Benjaminson et al. (US 3,617,780). The reference shows (fig. 1) an arbitrary shape piezoelectric element (10) comprising a convex-lens-shape concave part at one central oscillating surface and a convex-lens-shape concave part at another central surface.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballato (US 4,568,850) in view of Besson (US 4,221,986). Ballato

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shows (fig. 4) an arbitrary shape piezoelectric element comprising a planar part (surface 24) and a convex-lens-shape convex part (20) at another central surface. His planer part is not within a concavity. Besson shows (fig. 1) an arbitrary shape piezoelectric element comprising a planar concave part (surface 27) and a convex-lens-shape part (26) at another central surface. His convex part is within a concavity. It would have been obvious to one having ordinary skill in the art to so configure the Ballato invention such that the concave part was within a concavity, such as is shown by Besson, in order to provide for a means to mount the device and isolate vibration in the central part.

Claim 1, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Toyoda (US 3,979,614) in view of Besson (US 4,221,986). Toyoda shows (fig. 4) an arbitrary shape piezoelectric element comprising a planar part (surface 8) and a convex-lens-shape convex part (7) at another central surface. His planer part is not within a concavity. Besson shows (fig. 1) an arbitrary shape piezoelectric element comprising a planar concave part (surface 27) and a convex-lens-shape part (26) at another central surface. His convex part is within a concavity. It would have been obvious to one having ordinary skill in the art to so configure the Toyoda invention such that the concave part was within a concavity, such as is shown by Besson, in order to provide for a means to mount the device and isolate vibration in the central part.

Claim 2, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Toyoda (US 3,979,614) in view of Besson (US 4,221,986). Toyoda shows (fig. 1) an arbitrary shape piezoelectric element comprising a convex-lens shape part (surface 2) and a convex-lens-shape convex part (3) at another central surface.

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His convex-lens shape part is not within a concavity. Besson shows (fig. 1) an arbitrary shape piezoelectric element comprising a planar concave part (surface 27) and a convex-lens-shape part (26) at another central surface. His convex part is within a concavity. It would have been obvious to one having ordinary skill in the art to so configure the Toyoda invention such that one of the concave parts was within a concavity, such as is shown by Besson, in order to provide for a means to mount the device and isolate vibration in the central part.

Claim 3, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Ballato (US 4,568,850) in view of Besson (US 4,221,986). Ballato shows (fig. 7) an arbitrary shape piezoelectric element comprising a convex part (surface 20 sub 1) and a convex-lens-shape convex part (20 sub 2) at another central surface. His convex part is not within a concavity. Besson shows (fig. 1) an arbitrary shape piezoelectric element comprising a planar concave part (surface 27) and a convex-lens-shape part (26) at another central surface. His convex part is within a concavity. It would have been obvious to one having ordinary skill in the art to so configure the Ballato invention such that the convex part was within a concavity, such as is shown by Besson, in order to provide for a means to mount the device and isolate vibration in the central part.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The remaining prior art cited reads on at least some aspects of the claimed invention.

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Direct inquiry concerning this action to Examiner Dougherty at (703) 308-1628.

tmd
tmd

November 20, 2002



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2600